

ABSTRACT OF THE DISCLOSURE

A method and system for applying a multi-protocol label switching (MPLS) network to support QoS in general packet radio service (GPRS) is disclosed. An E-LSP tunnel with reserved bandwidth is pre-configured 5 between Gateway GPRS Support Node (GGSN) and each Service GPRS Support Node (SGSN), and between any two SGSNs. Before an Mobile Station (MS) wishes to transmit or receive packets, it need to ask its designated SSGN for establishing an on-demand L-LSP from the SGSN to the Corresponding Node (CN). This L-LSP is required to tunnel through the 10 pre-configured E-LSP that was mentioned above and here we apply the label stack technique from MPLS. Therefore, the packets of the on-demand L-LSP can be tunneled through the pre-configured E-LSP to the SGSN in which the MS is located, and then the SGSN is able to recognize and locate the mobile station according to the corresponding label in on-demand 15 L-LSP.